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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/932,427 09/17/97 KITAMURA Y 1081.1055/JD

STAAS & HALSEY
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WASHINGTON DC 20001

LM12/0911

EXAMINER

PORTKA, G

ART UNIT	PAPER NUMBER
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2759

DATE MAILED: 09/11/00

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/932,427

Applicant(s)

Kitamura

Examiner

Gary J. Portka

Group Art Unit
2759



☒ Responsive to communication(s) filed on Jul 14, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle* 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1, 3-7, and 9-16 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1, 3-7, and 9-16 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Continued Prosecution Application

1. The request filed on July 14, 2000 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 08/932,427 is acceptable and a CPA has been established. An action on the CPA follows.

2. Claims 1, 7, and 13-16 have been amended by Applicant. Claims 1, 3-7 and 9-16 are pending.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1, 3-7, and 9-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Tanaka et al., U.S. Patent 5,542,064 (hereinafter "Tanaka").

5. As to claims 1, 7, and 13-16 Tanaka discloses a RAID apparatus and control method comprising:

a. Plurality of disk units (Drives 16-x) storing a plurality of copies of each of logical volumes ("identical data"), and disk controller (2) for accessing the disk units/logical volumes (see Abstract, Figures 1 and 2, column 2 lines 14-17 and 54-67);

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b. The disk controller including a memory storing number of request operations to each disk, and control means comparing these and selecting the disk having the least (see Figure 5, column 6 line 62 to column 7 line 17, and column 8 lines 1-47), where the number is incremented/decremented for each new request/completion (see column 10 lines 19-24 and 44-49);

c. Wherein the disk units perform operations in a queued order (see column 4 lines 42-49, column 7 lines 33-53, and column 8 lines 1-5).

6. As to claims 3 and 9, Tanaka discloses channel adapter (4-x and 5) as claimed (see Figure 1, and column 3 lines 58 to column 4 line 1), device adapter (14 and 17-x) for accessing the disk units (see Figure 1 and column 4 lines 19-21), and resource manager circuit as claimed (including MP 11-x, see column 4 lines 13-24).

7. As to claims 4 and 10, Tanaka discloses the resource manager incrementing and decrementing number of operations of a disk unit (see column 10 lines 19-24 and 44-49).

8. As to claims 5-6 and 11-12, Tanaka discloses the memory stores status information for the disk units, for use in selecting a normal unit (see column 7 lines 4-9).

Response to Arguments

9. Applicant's arguments filed June 14, 2000 have been fully considered but they are moot in view of the new grounds of rejection.

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Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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5,809,516 Load balancing disk array using drive queue lengths (see Figure 25).

11. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) days from the mail date of this letter. Failure to respond within the period for response will result in Abandonment of the application (see 35 USC 133, MPEP 710.02, 710.02(b)).

12. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

or:

(703) 305-9731 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

13. Any inquiry concerning this communication from the Examiner should be directed to Gary J. Portka at telephone number (703) 305-4033. The Examiner can normally be reached on weekdays from 9:00 A.M. to 5:30 P.M.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Do Yoo, can be reached on (703) 308-4908. The fax phone number for this Group is (703) 305-9731.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, whose telephone number is (703) 305-3900.

GJP

Gary J. Portka

Patent Examiner

September 5, 2000

Do Hyun Yoo
DO HYUN YOO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2700